

12. (Once Amended) The programmable echo cancellation filter as claimed in claim 1, wherein the signal input is connected to a signal matching circuit for signal matching of the transmission signal.

13. (Once Amended) The programmable echo cancellation filter as claimed in claim 1, wherein the signal output is connected to an automatic gain control circuit in a reception signal path of the transceiver.

14. (Once Amended) The programmable echo cancellation filter as claimed in claim 1, wherein the resistors contained in the first, second and third programmable resistor circuits have weighted resistances.

15. (Once Amended) The programmable echo cancellation filter as claimed in claim 1, wherein a first gain ( $H_1$ ) of the echo cancellation filter is adjustable in a frequency range lying below a first cut-off frequency ( $f_U$ ) and a second gain ( $H_2$ ) of the echo cancellation filter is adjustable in a frequency range lying above a second cut-off frequency ( $f_O$ ), by a control circuit.

16. (Once Amended) The programmable echo cancellation filter as claimed in claim 15, wherein the first and second cut-off frequencies ( $f_U$ ,  $f_O$ ) of the echo cancellation filter are adjustable by the control circuit .

17. (Once Amended) A transceiver for xDSL signals, the transceiver comprising a programmable echo cancellation filter as recited in claim 1.

0997866-101101  
TOTTOT 997866

Applicant : Antonio Digiandomenico et al.  
Serial No. :  
Filed : October 11, 2001  
Page : 5

Attorney's Docket No.: 12816-033001 / S1541


REMARKS

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be examined.

Respectfully submitted,

Date: October 11, 2001



Frank R. Occhiuti  
Reg. No. 35,306

Fish & Richardson P.C.  
225 Franklin Street  
Boston, Massachusetts 02110-2804  
Telephone: (617) 542-5070  
Facsimile: (617) 542-8906

20328188.doc

0997568-10101  
"TOP" 89252560

**Version with markings to show changes made**

In the specification:

On page 3 delete lines 10 through 13 as shown:

[This object is achieved according to the invention by means of a programmable echo cancellation filter having the features specified in patent claim 1.]

In the claims:

Please amend the claims as follows:

1. (Once Amended) A programmable echo cancellation filter for echo signal cancellation for a transceiver [having], said filter comprising:
  - a signal output;
  - [(a)] a signal input [(13)] for receiving the transmission signal emitted by the transceiver [(1)];
  - [(b)] an input resistor [(36)] connected to the signal input [(13)];
  - [(c)] an operational amplifier [(39)], [whose] having a signal input [(38)] is] connected to the input resistor [(36)] and [whose] having a signal output [(41)] is] connected to an output resistor [(43)];
  - [(d)] a first programmable resistor circuit [(48), which is] provided between the signal output [(41)] of the operational amplifier [(39)] and the signal input [(38)] of the operational amplifier;
  - [(e)] a second programmable resistor circuit [(51), which is] provided between the output resistor [(43)] and [a] the signal output [(15)] of the echo cancellation filter (14)];
  - [(f)] a third programmable resistor circuit [(55), which is] provided between the first programmable resistor circuit [(48)] and the signal output [(15)] of the echo cancellation filter (14)];
  - [(g)] the first, second, and third programmable resistor circuits [(48, 51, 55)] each having a plurality of [resistors (65) which are terminated] switching elements connected in